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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/465,242	12/15/1999	Bruce E. Flinchbaugh	TI-27768	8650
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TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				MOE, AUNG SOE
ART UNIT		PAPER NUMBER		
2685				

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/465,242	FLINCHBAUGH, BRUCE E.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Aung S. Moe	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 07 June 2005.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-20 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 7 and 8 is/are allowed.
- 6) Claim(s) 1-6 and 9-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-6, 9-11 and 15-20 have been considered but are moot in view of the new ground(s) of rejection.

In addition, the Examiner respectfully disagree with the Applicant's remarks that the limitations of "recording an image responsive to the evaluating step" recited in the present claimed invention is the same as "deciding of whether to record an image". In particular, it is noted that present claimed invention does not make any "decision" regarding whether to record an image based on the evaluating step, and nowhere in the present claimed invention (i.e., claims 1-6, 9-11 and 15-20) recited that the image recording is not performed if the evaluating step does not meet certain criteria. In fact, the present claimed invention (i.e., Claims 1 and 15) broadly stated that the recording is merely based on the evaluating step, and Potts et al meet such features as set forth in the previous office action (i.e., see rejection below).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6, 9-14 and 15-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear how “a human facial characteristic” recited in line 7 related to “a human facial characteristic” recited in lines 3-4? If there is the same “facial characteristic”, the Examiner suggests changing “a human facial characteristic” recited in line 7 to - - said human facial characteristic - -.

In claim 1, it is unclear how “a specified criteria” recited in line 8 related to “a specified criteria” recited in line 4? If there is the same “specified criteria”, the Examiner suggests changing “a specified criteria” recited in line 8 to - - said specified criteria - -.

In claim 2, it is unclear how “a facial characteristic” recited in line 3 related to “a human facial characteristic” recited in lines 3-4 of claim 1? If there is the same “facial characteristic”, the Examiner suggests changing “a facial characteristic” recited in line 3 of claim 2 to - - said facial characteristic - -.

In claim 2, it is unclear how “an image” recited in line 2 related to “a still image” recited in line 8 of claim 1? If there is the same “image”, the Examiner suggests changing “an image” recited in line 7 to - - said image - -.

In claim 12, it is unclear how “a human facial characteristic” recited in lines 8 and 14 related to “a human facial characteristic” recited in lines 4-5? If there is the same “facial characteristic”, the Examiner suggests changing “a human facial characteristic” recited in lines 8 and 14 to - - said human facial characteristic - -.

In claim 12, it is unclear how “a specified criteria” recited in line 8 related to “a specified criteria” recited in line 5? If there is the same “specified criteria”, the Examiner suggests changing “a specified criteria” recited in line 9 to - - said specified criteria - -.

In claim 15, it is unclear how “a human facial characteristic” recited in line 12 related to “a human facial characteristic” recited in line 10? If there is the same “facial characteristic”, the Examiner suggests changing “a human facial characteristic” recited in line 12 to - - said human facial characteristic - -.

In claim 15, it is unclear how “a specified criteria” recited in line 12 related to “a specified criteria” recited in line 10? If there is the same “specified criteria”, the Examiner suggests changing “a specified criteria” recited in line 12 to - - said specified criteria - -.

In claim 15, it is unclear how “**a memory** for storing still digital images” recited in line 7 related to “**a memory** for storing digital images” recited in line 4?

In claim 16, it is unclear how “an image” recited in line 2 of claim 16 related to “a still image” recited in line 13 of clam 15? If there is the same “image”, the Examiner suggests changing “an image” recited in line 2 of claim 16 to - - said image - -.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa et al. (U.S. 5,296,945).

Regarding claim 1, Nishikawa '945 discloses a method for operating a camera, comprising the steps of:

responsive to an operator action (i.e., noted the operator action provided from the elements 44, 42 and 52 as shown in Figs. 2, 6 and 7-11), detecting visual information form a scene (i.e., noted that the camera 26 provide a scene which include visual information, such as a face image, which is detected by the elements 54, 52 and 38 and shown in Figs. 2 and 7-11);

evaluating the detected visual information (it is noted that with the use of a comparator, standard color memory, the arithmetic unit, and the detected complexion memory, the controller 38 is capable of evaluating the detected visual information, e.g., the face image, relative to a human facial complexion and the specific skin color) relative to a human facial characteristic (i.e., the complexion data from the face image) and a specified criteria (i.e., the specific skin color; see col. 3, lines 65- col. 4, lines 60; col. 7, lines 24+, col. 12, lines 20-50);

continuing the detecting and evaluating steps (i.e., noted that the controller 38 is capable of continuing the detecting and evaluating steps based on the operation command provided by the operator through the user interface elements 52/42 and 44; see col. 3, lines 50+ and col. 4, lines 45+) ; and

responsive to the evaluating step determining that the visual information from the scene includes information that is representative of the human facial characteristic (i.e., the complexion data; col. 3, lines 65+ and col. 11, lines 45+) and that satisfies the specified criteria (i.e., a desired/standard skin color; see col. 4, lines 5+; col. 7, lines 25; and col. 12, lines 45+), recording a still image of the scene (i.e., noted from Figs. 2-11, the still image of the scene is recorded in the memory, such as an auxiliary memory 50 or the image data file memory 72, in response to

the evaluating of the face image from the scene is performed by the controller 38; see col. 4, lines 50+, col. 7, lines 5+; col. 9, lines 30-35 and col. 11, lines 35-68).

Regarding claim 2, Nishikawa '945 discloses wherein said detecting step includes the step of detecting the image of radiation form the scene, which includes the visual information representative of the facial characteristic (i.e., noted that the face image data may include the facial characteristic, such that the male or female complexion data; see col. 9, lines 15+ and col. 12, lines 45+).

Regarding claim 15, Nishikawa '945 discloses a camera (i.e., see Figs. 2 and 7-11), comprising: an operator actuatable element (i.e., the elements 52, 42 and 44); a image detector (26); a memory for storing digital images (i.e., noted the digital images can be stored in the memory element, such as the elements 30, 50 and 72); and a control circuit (i.e., the controller 38), coupled to the operator actuatable element (i.e., the elements 52, 42 and 44) and to the image detector (26) and comprising:

a memory for storing still digital images (i.e., noted the memory 30, 50 and 72; see col. 4, lines 45-68; col. 15, lines 45+); and a processor (i.e., the elements 38, 54, 58, 56, 46, 52 and 60), for controlling the image detector (26) to detect visual information from a scene (i.e., the face image data) responsive to operator actuation of the element (52, 42 and 44), and for evaluating the detected visual information (it is noted that with the use of a comparator, standard color memory, the arithmetic unit, and the detected complexion memory, the controller 38 is capable of evaluating the detected visual information, e.g., the face image, relative to a human facial complexion and the specific skin color) relative to a human facial characteristic (i.e., a facial complexion) and a specified criteria (i.e., the specific target/desired skin color), and

for, responsive to the evaluating step determining that the visual information from the scene includes information that is representative of the human facial characteristic (i.e., the complexion data; col. 3, lines 65+ and col. 11, lines 45+) and that satisfies a specified criteria (i.e., a desired/standard skin color; see col. 4, lines 5+; col. 7, lines 25; and col. 12, lines 45+), recording a still image of the scene in the memory (i.e., noted from Figs. 2-11, the still image of the scene is recorded in the memory, such as an auxiliary memory 50 or the image data file memory 72, in response to the evaluating of the face image from the scene is performed by the controller 38; see col. 4, lines 50+, col. 7, lines 5+; col. 9, lines 30-35 and col. 11, lines 35-68).

Regarding claim 16, Nishikawa '945 discloses wherein said image detector (26) detects the image (i.e., the face image as shown in Fig. 6) of radiation from the scene (22).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6, 11, 15-17 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Potts et al. (US #6,593,956 B1) in view of Suzuki et al. (U.S. 4,991,009).

Regarding claim 1, Potts '956 teaches a method for operating a camera (Figs. 1 & 25), comprising the steps of:

responsive to an operator action and detecting visual information from a scene (Figs. 2-3, sound waves from a speaker are detected by audio source locator 28 and processing unit 20 and the video information detected by the device 60; see col. 6 line 16 – col. 7 line 22);

evaluating the detected information relative to a human facial characteristic (Figs. 3-4, video face location results) and a specified criteria (Fig. 5, flesh tone color detection) (col. 7 line 55 – col. 8 line 49; col. 9 line 3 – col. 10 line 62; col. 12 line 13 – col. 13 line 15);

continuing the detecting and evaluating steps (col. 7 lines 32-54); and

responsive to the evaluating step determining that the visual information (i.e., the video information) from the scene includes information that is representative of a human facial characteristic and that satisfies a specified criteria (col. 7 line 55 – col. 8 line 49; col. 9 line 3 – col. 10 line 62; col. 12 line 13 – col. 13 line 15; col. 17 line 34 – col. 19 line 65), recording an image frame of the scene (col. 7 lines 45-48 and col. 17, lines 20+).

Moreover, although Potts teaches the storing of a video image frame of the scene in the memory (i.e., see col. 7, lines 45+ and col. 17, lines 20+), Potts does not explicitly state recording of a **still image** of the scene. However, it is clearly well known in the art as evidenced by Suzuki '009 that an image frame of the video scene recorded in the memory of Potts's system can be considered as a still image (i.e., noted that the still video image frame can be stored in the memory 3; see col. 1, lines 10-15 and col. 4, lines 35-40. In particular, Suzuki '009 teaches that it is conventionally known to one of the ordinary skill in the art at the time of the invention was made to use a memory (3) for recording a still video image frame (i.e., see col. 4, lines 35-40 and

see Fig. 4 for storing a still image frame in the frame memory 3) so that it is possible to considerably reduce the quantity of the image data which is to be transmitted even when the image to be transmitted is dynamic (i.e., see col. 2, lines 20+).

In view of the above, having the system of Potts when the memory is used to record the image frame of the scene and then given the well-established teaching of Suzuki '009 that it is notoriously well known in the art that the still image can be recorded in the memory (3), it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Potts as taught by Suzuki '009 for recording a still image as required by the present claimed invention, since Suzuki '009 stated in col. 2, lines 20+ such a modification would reduce the quantity of the image data which is to be transmitted even when the image to be transmitted is dynamic.

As to claim 2, Potts teaches that said detecting step includes the step of detecting an image of radiation from the scene which includes the visual information representative of a facial characteristic (col. 7 line 55 – col. 8 line 49; col. 9 line 3 – col. 10 line 62; col. 12 line 13 – col. 13 line 15; col. 17 line 34 – col. 19 line 65).

As to claim 3, Potts teaches that said evaluating step includes the steps of identifying in the image of radiation at least one pattern representative of a face, and evaluating the pattern relative to the specified criteria (col. 7 line 55 – col. 8 line 49; col. 9 line 3 – col. 10 line 62; col. 12 line 13 – col. 13 line 15; col. 17 line 34 – col. 19 line 65).

As to claim 4, Potts teaches that the specified criteria includes a size limit criteria, and

wherein said evaluating step includes the step of rejecting each identified pattern which is representative of a face but which fails to satisfy the size limit criteria (col. 10 lines 7-52; col. 21 line 57 – col. 22 line 45).

As to claim 5, Potts teaches said evaluating step includes the steps of identifying in the image of radiation a plurality of patterns each representative of a respective face, and evaluating each such detected pattern relative to the specified criteria (col. 7 line 55 – col. 8 line 49; col. 9 line 3 – col. 10 line 62; col. 12 line 13 – col. 13 line 15; col. 17 line 34 – col. 19 line 65).

As to claim 6, Potts teaches that said evaluating step includes the steps of identifying in the image of radiation a plurality of patterns each representative of a respective face, thereafter using a further criteria to select a subset of the patterns, and then evaluating only the selected patterns in the subset relative to the specified criteria (col. 7 line 55 – col. 8 line 49; col. 9 line 3 – col. 10 line 62; col. 12 line 13 – col. 13 line 15; col. 17 line 34 – col. 19 line 65).

As to claim 11, Potts teaches that the specified criteria is whether a face is oriented toward the camera (col. 2 lines 18-30), and wherein said evaluating step includes the steps of identifying at least one face in the information from the scene, and analyzing whether each such identified face is oriented to face substantially toward the camera (col. 12 lines 13 – col. 13 line 47; col. 20 lines 26-58; col. 21 line 15-56; col. 22 lines 16+).

Regarding claim 15, Potts teaches a camera (Figs. 1 and 25), comprising: an operator actuatable element (microphone array 12); an image detector (camera 14); a memory for storing digital images (col. 7 lines 45-49);

a control circuit, coupled to the operator actuatable element and to the image detector, and comprising: a memory for storing digital images (col. 7 lines 45-49); and

a processor, for controlling the image detector to detect visual information from a scene (i.e., noted the detection of video signals by the device 60 of Fig. 3) responsive to operator actuation of the element, and for evaluating the detected information relative to a human facial characteristic and a specified criteria (i.e., Figs. 4 and 5), and for responsive to the evaluating step determining that the visual information from the scene includes information that is representative of a human facial characteristic and that satisfies a specified criteria (col. 7 line 55 – col. 8 line 49; col. 9 line 3 – col. 10 line 62; col. 12 line 13 – col. 13 line 15; col. 17 line 34 – col. 19 line 65), recording an image of the scene in the memory (col. 7 lines 45-49).

Moreover, although Potts teaches the storing of a video image frame of the scene in the memory (i.e., see col. 7, lines 45+ and col. 17, lines 20+), Potts does not explicitly state recording of a **still image** of the scene. However, it is clearly well known in the art as evidenced by Suzuki ‘009 that an image frame of the video scene recorded in the memory of Potts’s system can be considered as a still image (i.e., noted that the still video image frame can be stored in the memory 3; see col. 1, lines 10-15 and col. 4, lines 35-40. In particular, Suzuki ‘009 teaches that it is conventionally known to one of the ordinary skill in the art at the time of the invention was made to use a memory (3) for recording a still video image frame (i.e., see col. 4, lines 35-40 and see Fig. 4 for storing a still image frame in the frame memory 3) so that it is possible to considerably reduce the quantity of the image data which is to be transmitted even when the image to be transmitted is dynamic (i.e., see col. 2, lines 20+).

In view of the above, having the system of Potts when the memory is used to record the image frame of the scene and then given the well-established teaching of Suzuki ‘009 that it is notoriously well known in the art that the still image can be recorded in the memory (3), it would

have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Potts as taught by Suzuki '009 for recording a still image as required by the present claimed invention, since Suzuki '009 stated in col. 2, lines 20+ such a modification would reduce the quantity of the image data which is to be transmitted even when the image to be transmitted is dynamic.

As to claim 16, Potts teaches that said image detector detects the image of radiation from the scene (col. 6 lines 16-43).

As to claim 17, Potts teaches a microphone (Figs. 1 and 25, microphone array 12), coupled to the control circuit, for detecting audible sounds from the scene.

As to claim 20, Potts teaches that the specified criteria is whether a face associated with the facial characteristic is oriented to face substantially toward the camera (col. 2 lines 18-30; col. 12 lines 13 – col. 13 line 47; col. 20 lines 26-58; col. 21 line 15-56; col. 22 lines 16+).

8. Claims 9-10 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts '956 in view of Suzuki '009 as discussed above and further in view of Maurer (US #6,272,231 B1).

As to claims 9 and 10, the claims differs from the combination of Potts and Suzuki '009 in that they further require that the specified criteria is whether an eye is open or a mouth is closed, and wherein said evaluating step includes the steps of identifying at least one eye or one mouth in the visual information from the scene, and analyzing whether each such identified eye is open or mouth is closed. However, the limitations are well known in the art as shown in Maurer '231.

In the same field of endeavor, Maurer '231 teaches an apparatus for sensing a person's facial movements, features or characteristics comprising detecting and evaluating a person's face and corresponding facial features (col. 3 lines 13-53). Maurer '231 also teaches that the apparatus evaluates whether an eye is open or a mouth is closed (See Figs. 13-15; col. 11 lines 20-45). In light of the teaching from Maurer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the digital camera taught in Potts by having evaluating a human facial characteristic which satisfies the specified criteria whether an eye is open or a mouth is closed so as to implement the digital camera with a convenient and efficient facial feature sensing.

As to claim 18, see the Examiner's comments in the rejection of claim 9.

As to claim 19, see the Examiner's comments in the rejection of claim 10.

***Allowable Subject Matter***

9. Claims 12-14 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

10. Claims 7-8 are allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aung S. Moe whose telephone number is 571-272-7314. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Aung S. Moe*  
Aung S. Moe  
Primary Examiner  
Art Unit 2685

A. Moe  
August 18, 2005